INDIANA TRAFFIC SAFETY FACTS

June 2010

A collision produces three levels of data: collision, unit (vehicles), and individual. For this reason, readers should pay particular attention to the wording of statements about the data to avoid misinterpretations.

Designing and implementing effective traffic safety policies requires data-driven analysis of traffic collisions. To help in the policy-making process, the Indiana University Center for Criminal Justice Research is collaborating with the Indiana Criminal Justice Institute to analyze 2009 vehicle crash data from the Automated Reporting Information Exchange System (ARIES), maintained by the Indiana State Police. This marks the fourth year of this partnership. Research findings will be summarized in a series of fact sheets on various aspects of traffic collisions, including alcohol-related crashes, light and large trucks, dangerous driving, children, motorcycles, occupant protection, and young drivers. An additional publication will provide information on county and municipality data and the final publication will be the annual Indiana Crash Fact Book. These publications serve as the analytical foundation of traffic safety program planning and design in Indiana.

Indiana collision data are obtained from Indiana Crash Reports, as completed by law enforcement officers. As of December 31, 2009, approximately 99 percent of all collisions are entered electronically through the ARIES. Trends in collisions incidence as reported in these publications could incorporate the effects of changes to data elements on the Crash Report, agency-specific enforcement policy changes, re-engineered roadways, driver safety education programs and other unspecified effects. If you have questions regarding trends or unexpected results, please contact the Indiana Criminal Justice Institute, Traffic Safety Division for more information.







LIGHT TRUCKS 2009

In Indiana in 2009, 35 percent (116,412 of 329,900) of all vehicles involved in collisions and 34 percent (350 of 1,021) of vehicles involved in fatal collisions were light trucks (defined as vans, sport utility vehicles, and pickup trucks with a gross vehicle weight rating of 10,000 pounds or less). This fact sheet provides an overview of collisions involving light trucks in Indiana in 2009, including rates of light truck involvement, fatal and nonfatal injuries sustained in collisions involving light trucks, restraint use rates and alcohol use among drivers of light trucks, and county comparisons of rates of collisions involving light trucks. Data are from the Indiana State Police Automated Reporting Information Exchange System (ARIES) as of March 1, 2010.

Trends in collisions involving light trucks

Since 2007, collisions involving light trucks are on the decline. The number of collisions involving light trucks decreased 6.7 percent from 2008 to 2009 and 3.4 percent on average each year since 2005 (Table 1). Continuing the 2007 to 2008 decrease, fatal collisions involving light trucks fell an additional 4.1 percent (320 to 307) from 2008 to 2009. However, the proportion of fatal collisions involving light trucks increased 4 percentage points, to 49 percent in 2009.

Table 1: Indiana collisions, by light truck involvement and collision severity, 2005-2009

| Light truck involved? | 2005 | 2006 | 2007 | 2008 | 2009 | % change '08 - '09 | Average annual change |
|--------------------------|---------|---------|---------|---------|---------|-----------------------|-----------------------------|
| Yes | 110,914 | 100,345 | 105,508 | 103,053 | 96,116 | -6.7% | -3.4% |
| Fatal | 452 | 383 | 409 | 320 | 307 | -4.1% | -8.6% |
| Non-fatal injury | 21,662 | 19,759 | 18,897 | 17,567 | 16,617 | -5.4% | -6.4% |
| Property damage only | 88,800 | 80,203 | 86,202 | 85,166 | 79,192 | -7.0% | -2.6% |
| No | 97,445 | 92,376 | 99,491 | 102,399 | 93,560 | -8.6% | -0.8% |
| Fatal | 403 | 434 | 395 | 402 | 324 | -19.4% | -4.7% |
| Non-fatal injury | 20,099 | 19,090 | 18,519 | 17,791 | 16,794 | -5.6% | -4.4% |
| Property damage only | 76,943 | 72,852 | 80,577 | 84,206 | 76,442 | -9.2% | 0.1% |
| All | 208,359 | 192,721 | 204,999 | 205,452 | 189,676 | -7.7% | -2.1% |
| Fatal | 855 | 817 | 804 | 722 | 631 | -12.6% | -7.2% |
| Non-fatal injury | 41,761 | 38,849 | 37,416 | 35,358 | 33,411 | -5.5% | -5.4% |
| Property damage only | 165,743 | 153,055 | 166,779 | 169,372 | 155,634 | -8.1% | -1.3% |
| % Involving light trucks | 53.2% | 52.1% | 51.5% | 50.2% | 50.7% | - | - |
| Fatal | 52.9% | 46.9% | 50.9% | 44.3% | 48.7% | _ | - |
| Non-fatal injury | 51.9% | 50.9% | 50.5% | 49.7% | 49.7% | _ | - |
| Property damage only | 53.6% | 52.4% | 51.7% | 50.3% | 50.9% | _ | - |

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Notes:

Light trucks defined as vans, sport utility vehicles, and pickup trucks with a gross vehicle weight rating of 10,000 pounds or less.

Non-fatal injury collisions includes collisions with incapacitating, non-incapacitating, or possible injuries.

Table 2: Vehicles and non-motorists involved in Indiana collisions, by collision severity and vehicle type, 2005-2009

| | | Co | | | | | |
|-------------------------------------|---------|---------|---------|---------|---------|-----------------------|-----------------------------|
| Collision severity/ vehicle type | 2005 | 2006 | 2007 | 2008 | 2009 | % change '08 - '09 | Average annual change |
| All collisions | 363,538 | 336,585 | 359,389 | 357,635 | 332,638 | -7.0% | -2.0% |
| Passenger car | 200,706 | 186,229 | 197,106 | 200,024 | 187,981 | -6.0% | -1.5% |
| Light truck | 134,189 | 121,753 | 127,761 | 124,122 | 116,412 | -6.2% | -3.3% |
| Large truck | 17,262 | 14,374 | 15,033 | 14,796 | 11,591 | -21.7% | -8.8% |
| Motorcycle/moped | 2,965 | 3,163 | 3,656 | 3,915 | 3,354 | -14.3% | 3.8% |
| Other motor vehicle | 7,604 | 9,546 | 12,973 | 11,800 | 10,568 | -10.4% | 10.5% |
| Non-motorists | 812 | 1,520 | 2,860 | 2,978 | 2,732 | -8.3% | 42.8% |
| Fatal collisions | 1,352 | 1,352 | 1,349 | 1,229 | 1,088 | -11.5% | -5.1% |
| Passenger car | 539 | 553 | 500 | 508 | 417 | -17.9% | -5.8% |
| Light truck | 526 | 449 | 474 | 354 | 350 | -1.1% | -8.9% |
| Large truck | 148 | 141 | 149 | 133 | 110 | -17.3% | -6.8% |
| Motorcycle/moped | 114 | 113 | 121 | 128 | 118 | -7.8% | 1.0% |
| Other motor vehicle | 24 | 26 | 28 | 24 | 26 | 8.3% | 2.5% |
| Non-motorists | 1 | 70 | 77 | 82 | 67 | -18.3% | 1724.6% |
| % In fatal collisions | 0.37% | 0.40% | 0.38% | 0.34% | 0.33% | - | - |
| Passenger car | 0.27% | 0.30% | 0.25% | 0.25% | 0.22% | - | - |
| Light truck | 0.39% | 0.37% | 0.37% | 0.29% | 0.30% | - | - |
| Large truck | 0.86% | 0.98% | 0.99% | 0.90% | 0.95% | - | - |
| Motorcycle/moped | 3.84% | 3.57% | 3.31% | 3.27% | 3.52% | - | - |
| Other motor vehicle | 0.32% | 0.27% | 0.22% | 0.20% | 0.25% | - | - |
| Non-motorists | 0.12% | 4.61% | 2.69% | 2.75% | 2.45% | | |

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Notes

Light trucks defined as vans, sport utility vehicles, and pickup trucks with a gross vehicle weight rating of 10,000 pounds or less.

Large trucks defined as units identified as truck (single 2 axle, 6 tires), truck (single 3 or more axles), truck/trailer (not semi), tractor/one semi trailer.

Other motor vehicles includes buses, combination vehicles, farm vehicles, motor home/recreational vehicles, animal drawn vehicles, and unknown vehicle types.

Non-motorists includes pedestrians and pedalcyclists.

Table 3: Persons involved in light truck collisions in Indiana, by injury status 2005-2009

| | | Cour | | | | | |
|---|---------|---------|---------|---------|---------|-----------------------|-----------------------------|
| Light truck involvement/ injury status | 2005 | 2006 | 2007 | 2008 | 2009 | % change '08 - '09 | Average annual change |
| Persons not in light trucks | 68,229 | 60,663 | 61,583 | 58,579 | 55,680 | -4.9% | -4.8% |
| Fatal | 161 | 160 | 166 | 165 | 137 | -17.0% | -3.6% |
| Incapacitating | 740 | 767 | 729 | 698 | 657 | -5.9% | -2.9% |
| Non-incapacitating | 11,651 | 10,727 | 10,312 | 9,396 | 9,206 | -2.0% | -5.7% |
| Other injury | 6,929 | 4,409 | 1,697 | 1,162 | 858 | -26.2% | -38.9% |
| Not injured | 48,748 | 44,600 | 48,679 | 47,158 | 44,822 | -5.0% | -1.9% |
| Persons in light trucks | 128,975 | 116,099 | 120,585 | 116,227 | 109,427 | -5.9% | -3.9% |
| Fatal | 335 | 266 | 297 | 193 | 198 | 2.6% | -10.3% |
| Incapacitating | 1,224 | 1,084 | 1,019 | 956 | 831 | -13.1% | -9.2% |
| Non-incapacitating | 18,531 | 16,661 | 15,649 | 14,074 | 13,562 | -3.6% | -7.5% |
| Other injury | 12,949 | 8,137 | 3,289 | 2,347 | 1,732 | -26.2% | -37.9% |
| Not injured | 95,936 | 89,951 | 100,331 | 98,657 | 93,104 | -5.6% | -0.5% |
| Persons in light trucks as | | | | | | | |
| % of total | 65.4% | 65.7% | 66.2% | 66.5% | 66.3% | - | - |
| Fatal | 67.5% | 62.4% | 64.1% | 53.9% | 59.1% | - | - |
| Incapacitating | 62.3% | 58.6% | 58.3% | 57.8% | 55.8% | - | - |
| Non-incapacitating | 61.4% | 60.8% | 60.3% | 60.0% | 59.6% | - | - |
| Other injury | 65.1% | 64.9% | 66.0% | 66.9% | 66.9% | - | - |
| Not injured | 66.3% | 66.9% | 67.3% | 67.7% | 67.5% | - | - |

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Notes:

Light trucks defined as vans, sport utility vehicles, and pickup trucks with a gross vehicle weight rating of 10,000 pounds or less.

Non-incapacitating includes non-incapacitating and possible injuries.

Persons not in light trucks includes other vehicle occupants and non-motorists.

The number of light trucks involved in collisions decreased 6.2 percent from 2008 to 2009, slightly less than the 7 percent reduction for all vehicles (Table 2). While all vehicles involved in fatal collisions fell 11.5 percent from 2008 to 2009, light trucks fell only 1.1 percent; a modest reduction compared to all vehicles and compared to the 25 percent decrease from 2007 to 2008 (474 to 354). Light trucks in collisions were just as likely as all motor vehicles (excluding non-motorists) to be involved in a fatal collision in 2009 (0.3 percent).

As the number of collisions involving light trucks has declined, so have injuries to persons in those collisions. From 2008 to 2009, the number of persons suffering fatal, incapacitating, non-incapacitating, and other injuries in collisions involving light trucks fell 6.4, 10, 3, and 26.2 percent, respectively (calculated from Table 3). While fatal injuries to persons in other vehicles in collisions with light trucks decreased 17 percent from 2008 to 2009, fatal injuries to light truck occupants increased 2.6 percent from 193 in 2008 to 198 in 2009. Similarly, 59 percent of all fatal injuries in collisions involving light trucks were to persons in light trucks, up from 54 percent in 2008.

Only 33 percent of all collisions involving light trucks occurred in rural locales in 2009, but 71 percent of fatal collisions involving light trucks occurred in these areas

Since 2007, Scollisions involving light trucks are on the decline.

Table 4: Indiana collisions involving light trucks by locality, and collision severity, 2005-2009

| | | Cou | nt of collis | ions | | | |
|-----------------------------|---------|---------|--------------|---------|--------|-----------------------|-----------------------------|
| | 2005 | 2006 | 2007 | 2008 | 2009 | % change '08 - '09 | Average annual change |
| All collisions | 110,914 | 100,345 | 105,508 | 103,053 | 96,116 | -6.7% | -3.4% |
| Fatal | 452 | 383 | 409 | 320 | 307 | -4.1% | -8.6% |
| Non-fatal injury | 21,662 | 19,759 | 18,897 | 17,567 | 16,617 | -5.4% | -6.4% |
| Property damage only | 88,800 | 80,203 | 86,202 | 85,166 | 79,192 | -7.0% | -2.6% |
| Rural collisions | 42,588 | 38,172 | 35,197 | 34,898 | 31,842 | -8.8% | -6.9% |
| Fatal | 332 | 278 | 295 | 220 | 217 | -1.4% | -9.2% |
| Non-fatal injury | 8,850 | 7,990 | 6,653 | 6,323 | 5,765 | -8.8% | -10.1% |
| Property damage only | 33,406 | 29,904 | 28,249 | 28,355 | 25,860 | -8.8% | -6.1% |
| Single-vehicle collisions | 25,300 | 22,911 | 24,962 | 25,795 | 22,766 | -11.7% | -2.2% |
| Fatal | 186 | 154 | 169 | 129 | 132 | 2.3% | -7.2% |
| Non-fatal injury | 4,844 | 4,417 | 4,767 | 4,704 | 4,064 | -13.6% | -4.0% |
| Property damage only | 20,270 | 18,340 | 20,026 | 20,962 | 18,570 | -11.4% | -1.8% |
| % Rural collisions | 38.4% | 38.0% | 33.4% | 33.9% | 33.1% | - | - |
| Fatal | 73.5% | 72.6% | 72.1% | 68.8% | 70.7% | - | - |
| Non-fatal injury | 40.9% | 40.4% | 35.2% | 36.0% | 34.7% | - | - |
| Property damage only | 37.6% | 37.3% | 32.8% | 33.3% | 32.7% | - | - |
| % Single-vehicle collisions | 77.2% | 77.2% | 76.3% | 75.0% | 76.3% | _ | - |
| Fatal | 58.8% | 59.8% | 58.7% | 59.7% | 57.0% | - | - |
| Non-fatal injury | 77.6% | 77.6% | 74.8% | 73.2% | 75.5% | - | - |
| Property damage only | 77.2% | 77.1% | 76.8% | 75.4% | 76.6% | _ | - |
| Relative risk of fatality | | | | | | | |
| Rural collisions | 4.4 | 4.3 | 5.2 | 4.3 | 4.9 | - | - |
| Single-vehicle collisions | 2.4 | 2.3 | 2.3 | 2.0 | 2.4 | - | - |

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Notes:

Light trucks defined as vans, sport utility vehicles, and pickup trucks with a gross vehicle weight rating of 10,000 pounds or less.

Urban collisions are those that occurred within the incorporated limits of the city as identified on the collision report.

Non-incapacitating includes collisions with non-incapacitating and possible injuries.

Non-fatal injury collisions include collisions with *incapacitating*, non-incapacitating, or possible injuries. Relative risk of fatality defined as ratio of % fatal (rural/single vehicle) to % fatal (urban/multiple vehicle).

Table 5: Indiana fatal collisions involving light trucks, by road class and time, 2005-2009

| | 2005 | 2006 | 2007 | 2008 | 2009 | % change '08 - '09 | Average annual change |
|-------------------------------|--------|-------|-------|-------|-------|-----------------------|-----------------------------|
| All fatal | 450 | 382 | 409 | 320 | 307 | -4.1% | -8.5% |
| County road | 108 | 86 | 108 | 67 | 80 | 19.4% | -3.3% |
| State road | 130 | 131 | 113 | 84 | 76 | -9.5% | -12.0% |
| Local/city road | 80 | 67 | 73 | 74 | 71 | -4.1% | -2.5% |
| US route | 82 | 55 | 73 | 64 | 57 | -10.9% | -5.9% |
| Interstate | 49 | 41 | 39 | 29 | 20 | -31.0% | -19.5% |
| Unknown road type | 1 | 2 | 3 | 2 | 3 | 50.0% | 41.7% |
| Fatal, nighttime (6pm-5:59am) | 202 | 175 | 171 | 137 | 139 | 1.5% | -8.5% |
| County road | 50 | 48 | 63 | 27 | 43 | 59.3% | 7.3% |
| State road | 56 | 55 | 37 | 33 | 28 | -15.2% | -15.1% |
| Local/city road | 37 | 31 | 31 | 39 | 39 | 0.0% | 2.4% |
| US route | 34 | 21 | 18 | 21 | 20 | -4.8% | -10.2% |
| Interstate | 24 | 20 | 21 | 16 | 8 | -50.0% | -21.4% |
| Unknown road type | 1 | 0 | 1 | 1 | 1 | 0.0% | 0.0% |
| % All fatal, nighttime | 44.9% | 45.8% | 41.8% | 42.8% | 45.3% | - | - |
| County road | 46.3% | 55.8% | 58.3% | 40.3% | 53.8% | - | - |
| State road | 43.1% | 42.0% | 32.7% | 39.3% | 36.8% | - | - |
| Local/city road | 46.3% | 46.3% | 42.5% | 52.7% | 54.9% | - | - |
| US route | 41.5% | 38.2% | 24.7% | 32.8% | 35.1% | - | - |
| Interstate | 49.0% | 48.8% | 53.8% | 55.2% | 40.0% | - | - |
| Unknown road type | 100.0% | 0.0% | 33.3% | 50.0% | 33.3% | - | - |

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Notes:

Light trucks defined as vans, sport utility vehicles, and pickup trucks with a gross vehicle weight rating of 10,000 pounds or less.

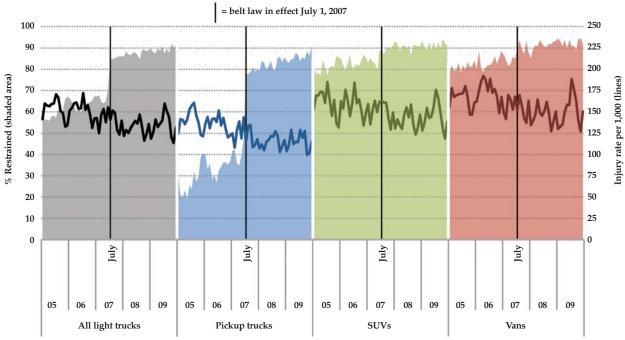
Exludes collisions with invalid time reported.

(Table 4). Rural collisions involving light trucks were 4.9 times more likely to be fatal than those in urban areas in 2009, up from 4.3 in 2008. While collisions involving only one light truck and no other vehicles (i.e., single-vehicle collisions) decreased 11.7 percent from 2008 to 2009, fatal collisions involving only one light truck and no other vehicles increased 2.3 percent. Single-vehicle light truck collisions were 2.4 times more likely to be fatal than multiple-vehicle light truck collisions in 2009, up from 2.0 in 2008.

With the exception of county roads (and unknown road types), fatal light truck collisions on all other road types decreased in 2009 (Table 5). Fatal light truck collisions on county roads increased 19.4 percent overall from 2008 to 2009, and 59.3 percent during nighttime hours (6pm - 5:59am). In 2009, 53.8 percent of fatal light truck collisions on county roads occurred at night compared to 40.3 percent in 2008. Conversely, 40 percent of fatal light truck collisions on interstates occurred at night compared to 55.2 percent in 2008.

INDIANA TRAFFIC SAFETY FACTS

Figure 1: Monthly restraint use and injury rates among light truck vehicle occupants involved in Indiana collisions, 2005-2009



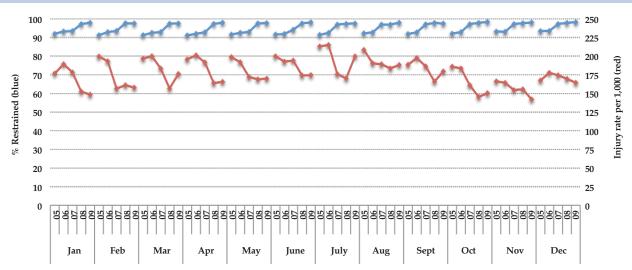
Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Notes

Light trucks defined as vans, sport utility vehicles, and pickup trucks with a gross vehicle weight rating of 10,000 pounds or less. Data are for individuals where restraint use is known.

 $In jury\ rates\ based\ on\ individuals\ with\ \textit{fatal, incapacitating, non-incapacitating, or\ possible\ injuries.}$

Figure 2: Year-over-year comparisons of monthly restraint use and injury rates among light truck vehicle occupants involved in Indiana collisions, 2005-2009



Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Notes:

Light trucks defined as vans, sport utility vehicles, and pickup trucks with a gross vehicle weight rating of 10,000 pounds or less. Data are for individuals where restraint use is known.

Injury rates based on individuals with fatal, incapacitating, non-incapacitating, or possible injuries.

Table 6: Restraint use rates among vehicle occupants involved in Indiana collisions, by vehicle type and collision/injury severity, 2008-2009

| | | 2008 | | | | | | 2009 | | | | | |
|-------------------------------|--------|----------|-------|-------|----------------|-----------------|--------|---------|--------|-------|----------------|-----------------|--|
| | | Light Tr | ucks | | | | | Light 7 | Trucks | | | | |
| | Pickup | CV IV | ** | 4.11 | Other motor | All vehicles | Pickup | CV TV | ** | 4.11 | Other motor | All vehicles | |
| Persons involved in | trucks | SUVs | Vans | All | vehicles | types | trucks | SUVs | Vans | All | vehicles | trypes | |
| All collisions | 96.5% | 98.1% | 98.2% | 97.5% | 96.7% | 97.0% | 97.2% | 98.3% | 98.5% | 97.9% | 96.8% | 97.2% | |
| Fatal | 60.7% | 58.4% | 79.2% | 64.4% | 66.0% | 65.5% | 64.9% | 59.1% | 85.2% | 66.4% | 67.2% | 66.9% | |
| Incapacitating | 80.2% | 85.4% | 90.8% | 84.8% | 76.9% | 79.6% | 80.4% | 85.7% | 91.1% | 84.9% | 77.6% | 80.1% | |
| Non-incapacitating | 91.8% | 95.5% | 96.4% | 94.3% | 91.7% | 92.6% | 93.3% | 96.2% | 96.5% | 95.3% | 92.0% | 93.1% | |
| Property damage only | 98.2% | 99.3% | 99.1% | 98.8% | 98.8% | 98.8% | 98.7% | 99.3% | 99.3% | 99.1% | 98.9% | 98.9% | |
| Daytime collisions (6a-5:59p) | 97.5% | 98.7% | 98.7% | 98.2% | 97.4% | 97.7% | 98.0% | 98.8% | 98.9% | 98.5% | 97.4% | 97.8% | |
| Evening collisions (6p-5:59a) | 93.8% | 96.6% | 96.8% | 95.5% | 94.9% | 95.1% | 94.8% | 96.8% | 97.1% | 96.1% | 95.1% | 95.5% | |
| Persons by injury status and | | | | | | | | | | | | | |
| occupant type | | | | | | | | | | | | | |
| Fatal injury | 27.3% | 27.4% | 54.8% | 32.4% | 49.1% | 44.8% | 34.6% | 27.9% | 75.9% | 38.9% | 51.7% | 47.7% | |
| Incapacitating injury | 67.5% | 74.5% | 87.7% | 75.0% | 67.2% | 69.5% | 67.1% | 75.0% | 85.0% | 74.0% | 66.8% | 68.8% | |
| Non-incapacitating injury | 86.7% | 93.0% | 94.1% | 91.1% | 87.9% | 89.0% | 88.6% | 94.0% | 94.6% | 92.4% | 88.3% | 89.7% | |
| Other injury | 96.4% | 98.2% | 98.6% | 97.6% | 97.3% | 97.4% | 97.6% | 98.7% | 99.4% | 98.4% | 98.0% | 98.1% | |
| No injury | 98.2% | 99.3% | 99.1% | 98.8% | 98.7% | 98.8% | 98.6% | 99.3% | 99.3% | 99.0% | 98.8% | 98.9% | |
| Drivers | 97.0% | 98.6% | 98.7% | 98.0% | 97.3% | 97.5% | 97.6% | 98.7% | 98.9% | 98.3% | 97.4% | 97.7% | |
| Injured occupants | 80.1% | 88.3% | 90.1% | 86.5% | 83.7% | 84.7% | 82.7% | 90.2% | 91.2% | 88.4% | 84.2% | 85.7% | |

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Light trucks defined as vans, sport utility vehicles, and pickup trucks with a gross vehicle weight rating of 10,000 pounds or less.

Other motor vehicles includes pickup trucks weighing more than 10,000 pounds, buses, combination vehicles, farm vehicles, motor home/recreational vehicles, and unknown vehicle types.

Non-incapacitating includes non-incapacitating and possible injuries.

Time-of-day breakdown excludes individuals in collisions with invalid time reported.

Data are for individuals where restraint use was known.

Safety equipment use

On July 1, 2007, Indiana Public Law 214 became effective, requiring all occupants of pickup trucks and SUVs and vans registered as trucks to wear safety belts. Shortly thereafter, the rate of restraint use among light truck occupants involved in collisions increased sharply and ultimately stabilized at a higher level, while the injury rate for light truck occupants involved in collisions continued a downward trend (Figure 1).

Year-over-year comparisons of monthly restraint use rates show sharp increases for all months from the year before Public Law 214 to the year after (Figure 2). These increases continued, although to a lesser degree, from 2008 to 2009 for all but two months, February and September. Like restraint use rates, injury rates declined for all months and significantly for most months from the year before Public Law 214 to the year after. However, from 2008 to 2009, injury rates rose for eight of 12 months (March through October), even while restraint use rates increased for all but one of those eight months (September).

Table 6 shows restraint use rates for 2008 and 2009 for different types of collisions, occupants, and injury outcomes. Generally, restraint use rates increased more from 2008 to 2009 for light truck occupants in collisions than for occupants of other vehicles in collisions. In all collisions and fatal collisions, restraint use increased 0.4 and 2 percentage points (calculated from Table 6), respectively, for light truck occupants, compared to 0.1 and 1.2 percentage points for occupants of other vehicles. From 2008 to 2009 among persons suffering fatal injuries, restraint use rates increased 6.5 percentage points among light

truck occupants, compared to 2.9 for other vehicle types. Drivers were more likely to be restrained than injured occupants.

Alcohol use

With the exception of drivers of motorcycles/mopeds, drivers of light trucks involved in fatal collisions are more likely to be impaired (BAC \geq 0.08 g/dL) than drivers of other vehicle types. In 2009, 18.5 percent of light truck drivers in fatal collisions were impaired compared to 14.4 percent of all drivers involved in fatal collisions. While the total number of impaired drivers in fatal collisions decreased 28.9 percent from 2008 to 2009, the number of impaired light truck drivers in fatal collisions increased 3.3 percent.

> In 2009, 18.5 percent of light truck drivers in fatal collisions were impaired.



County comparisons

On average, 51.3 percent of county collisions in 2009 involved at least one light truck. Higher proportions were concentrated in counties in the southern half of the state (Map 1). Vanderburgh County had the highest proportion of collisions involving light trucks at 62.6 percent, followed by Jennings, Knox, Howard, and Scott. At 41.7 percent, Crawford County had the smallest proportion of collisions involving light trucks followed by Union, Blackford, Dearborn, and Boone.

Table 7: Drivers in Indiana fatal collisions who were impaired, by vehicle type, 2005-2009

| | | Co | unt of drive | ers | | | |
|-------------------------------|-------|-------|--------------|-------|-------|-----------------------|-----------------------------|
| | 2005 | 2006 | 2007 | 2008 | 2009 | % change '08 - '09 | Average annual change |
| All drivers, fatal collisions | 1,305 | 1,240 | 1,236 | 1,115 | 991 | -11.1% | -6.6% |
| Passenger car | 521 | 544 | 482 | 498 | 408 | -18.1% | -5.4% |
| Light truck | 509 | 426 | 466 | 346 | 336 | -2.9% | -8.9% |
| Motorcycle/moped | 114 | 113 | 121 | 127 | 118 | -7.1% | 1.0% |
| Large truck | 141 | 138 | 143 | 125 | 109 | -12.8% | -6.0% |
| Other | 20 | 19 | 24 | 19 | 20 | 5.3% | 1.4% |
| Impaired drivers | 248 | 231 | 218 | 201 | 143 | -28.9% | -12.3% |
| Passenger car | 103 | 116 | 95 | 103 | 55 | -46.6% | -10.9% |
| Light truck | 108 | 80 | 84 | 60 | 62 | 3.3% | -11.5% |
| Motorcycle/moped | 33 | 31 | 38 | 35 | 22 | -37.1% | -7.1% |
| Large truck | 1 | 2 | 0 | 2 | 2 | 0.0% | 0.0% |
| Other | 3 | 2 | 1 | 1 | 2 | 100.0% | 4.2% |
| % Impaired | 19.0% | 18.6% | 17.6% | 18.0% | 14.4% | - | - |
| Passenger car | 19.8% | 21.3% | 19.7% | 20.7% | 13.5% | - | - |
| Light truck | 21.2% | 18.8% | 18.0% | 17.3% | 18.5% | _ | - |
| Motorcycle/moped | 28.9% | 27.4% | 31.4% | 27.6% | 18.6% | _ | - |
| Large truck | 0.7% | 1.4% | 0.0% | 1.6% | 1.8% | _ | - |
| Other | 15.0% | 10.5% | 4.2% | 5.3% | 10.0% | - | - |

Source: Indiana State Police Automated Reporting Information Exchange System (ARIES), as of March 1, 2010.

Notes:

Light trucks defined as vans, sport utility vehicles, and pickup trucks with a gross vehicle weight rating of 10,000 pounds or less.

Large trucks defined as units identified as truck (single 2 axle, 6 tires), truck (single 3 or more axles), truck/trailer (not semi), tractor/one semi trailer.

Other motor vehicles includes buses, combination vehicles, farm vehicles, motor home/recreational vehicles, animal drawn vehicles, and unknown vehicle types.

Driver impaired defined as drivers with a blood alcohol concentration (BAC) greater than or equal to 0.08 grams per decliter (g/dL).

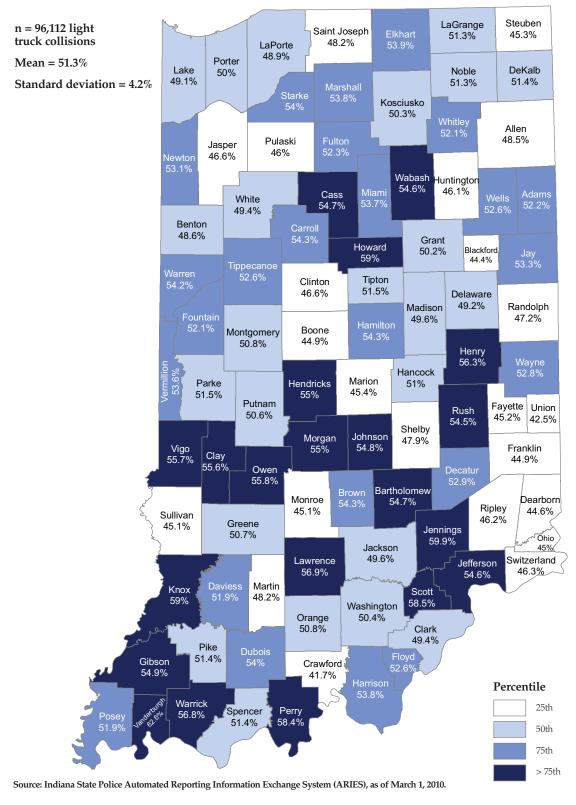
Summary

For collisions involving light trucks, 2009 was a year of improvements and setbacks. Total collisions and fatal collisions involving light trucks fell from 2008 to 2009 and on average since 2005, but a larger proportion of all fatal collisions (nearly half) involved light trucks. Fewer light trucks were involved in collisions in 2009; however, while all vehicles involved in fatal collisions fell 11 percent, light trucks declined only 1.1 percent. Injuries to persons involved in light truck collisions decreased

from 2008 to 2009, yet fatal injuries to persons in light trucks increased, as did the proportion of fatal injuries in light truck collisions attributed to persons in light trucks. Single-vehicle light truck collisions fell 11.7 percent from 2008 to 2009, while fatal single vehicle collisions increased 2.3 percent. Restraint use rates among light truck occupants continued an upward trend in 2009, yet injury rates for light truck occupants increased for eight of 12 months compared to 2008. The number and proportion of light truck drivers who were impaired increased in 2009, while decreasing sharply for drivers of passenger cars and motorcycles/mopeds.

Collisions involving light trucks improved in many ways in 2009, though opportunities for further improvements are readily apparent. The Indiana Criminal Justice Institute launched a special initiative in May 2010, Buckle up Trucks, that focused on increasing restraint use among truck occupants.

Map 1: Proportion of Indiana collisions involving light trucks, by county, 2009



Notes:

Light trucks defined as vans, sport utility vehicles, and pickup trucks with a gross vehicle weight rating of 10,000 pounds or less. Excludes collisions with invalid county.

Standard deviation is the county average difference from the mean.

The number of collisions involving light trucks by county ranged from 54 to 11,995.



This publication was prepared on behalf of the Indiana Criminal Justice Institute by the Indiana University Center for Criminal Justice Research (CCJR). Please direct any questions concerning data in this document to ICJI at 317-232-1233.

This publication is one of a series of fact sheets that, along with the annual Indiana Crash Fact Book, form the analytical foundation of traffic safety program planning and design in the state of Indiana. Funding for these publications is provided by the Indiana Criminal Justice Institute and the National Highway Traffic Safety Administration.

An electronic copy of this document can be accessed via the CCJR website (www.ccjr.iupui.edu), the ICJI website (www.in.gov/cji/), or you may contact the Center for Criminal Justice Research at 317-261-3000.

The Indiana Criminal Justice Institute (ICJI)

Guided by a Board of Trustees representing all components of Indiana's criminal and juvenile justice systems, the Indiana Criminal Justice Institute serves as the state's planning agency for criminal justice, juvenile justice, traffic safety, and victim services. ICJI develops long-range strategies for the effective administration of Indiana's criminal and juvenile justice systems and administers federal and state funds to carry out these strategies.

The Governor's Council on Impaired & Dangerous Driving

The Governor's Council on Impaired & Dangerous Driving, a division of the Indiana Criminal Justice Institute, serves as the public opinion catalyst and the implementing body for statewide action to reduce death and injury on Indiana roadways. The Council provides grant funding, training, coordination and ongoing support to state and local traffic safety advocates.

Indiana University Public Policy Institute

The Indiana University (IU) Public Policy Institute is a collaborative, multidisciplinary research institute within the Indiana University School of Public and Environmental Affairs (SPEA), Indianapolis. The Institute serves as an umbrella organization for research centers affiliated with SPEA, including the Center for Urban Policy and the Environment and the Center for Criminal Justice Research. The Institute also supports the Office of International Community Development and the Indiana Advisory Commission on Intergovernmental Relations (IACIR).

The Center for Criminal Justice Research (CCJR)

The Center for Criminal Justice Research, one of two applied research centers currently affiliated with the Indiana University Public Policy Institute, works with public safety agencies and social services organizations to provide impartial applied research on criminal justice and public safety issues. CCJR provides analysis, evaluation, and assistance to criminal justice agencies; and community information and education on public safety questions. CCJR research topics include traffic safety, crime prevention, criminal justice systems, drugs and alcohol, policing, violence and victimization, and youth.

The National Highway Traffic Safety Administration (NHTSA)

NHTSA provides leadership to the motor vehicle and highway safety community through the development of innovative approaches to reducing motor vehicle crashes and injuries. The mission of NHTSA is to save lives, prevent injuries and reduce economic costs due to road traffic crashes, through education, research, safety standards and enforcement activity.

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